

REMARKS

Claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Applicant's admitted prior art ("APA") in view of Eilersten et al. ("Eilersten"), and claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of Eilersten and Vincent et al.. Claim 1 is independent. These rejections are respectfully traversed for the following reasons.

Claim 1 recites in pertinent part, "wherein a bottom surface of substantially all of the phosphor particles in the synthetic resin layer contacts the light-transmitting electrode-layer underneath." The Examiner admits that APA does not disclose the claimed combination and therefore relied on the teachings of Eilersten related to the phosphor particles to modify APA in an attempt to reach the claimed invention. However, Eilersten discloses phosphor particles that are in the soft landed state whereby the bottom surface of the phosphor particles do not make contact with the lower light-transmitting electrode layer underneath. Accordingly, it is respectfully submitted that neither APA nor Eilersten, alone or in combination, disclose or suggest the claimed **combination** of features as recited in claim 1.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claim 1 because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

For example, with respect to claim 3, it is unclear which portion of Eilersten the Examiner is alleging discloses a synthetic resin layer ***that is not adhesive at room temperature***. Eilersten appears to be silent as to such a feature. It should be noted that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999). In the instant case, there is no evidence that the alleged synthetic resin of Eilersten is not adhesive at room temperature, let alone any suggestion that it is ***necessarily*** not adhesive at room temperature. Indeed, as discovered only by Applicants, such a construction can ease storage of the substrate with the resin layer formed thereon so as to prevent the substrate from being covered with dust.

Regarding claim 4, although Eilersten may appear to disclose phosphor particles whose diameters are greater than a thickness of the synthetic resin layer, Eilersten et al. does not suggest that a bottom surface of the phosphor particles contacts the layer 17 immediately underneath. In fact, Eilersten appears to teach away from such a configuration (*see, e.g.*, col. 2, lines 43-48) due to potential short-circuiting.

Regarding claims 6 and 7, the Examiner alleges the recited ranges would have been obvious design choice. However, it is respectfully submitted that the claimed ranges provide results that would be considered new and/or unexpected (e.g., as described on page 7, lines 7-14 of Applicants' specification) to one of ordinary skill in the art at the time of the invention, so as to rebut the alleged showing of *prima facie* obviousness. Pursuant to MPEP § 2144.05(III), Applicants can rebut a *prima facie* case of obviousness by showing the criticality of the claimed range. As noted in Applicants' specification, the claimed ranges provide benefits/advantages not recognized by the prior art. For example, when the diameter of the phosphor particles is larger, the emission life of the EL lamp is longer but the driving voltage is higher. On the other hand, a smaller diameter phosphor particle tends to be heated due to the applied AC voltage so as to damage the quality of the EL lamp while also increasing the surface area of the phosphor particles per unit so as to cause damage resulting from increased moisture absorption. Only Applicants have discovered and considered these issues and conceived of the novel and non-obvious ranges needed to obviate such problems in the prior art. In contrast, the prior art is completely silent as to *any* range for the respective features (diameter, thickness), let alone identify the effects discussed above which may lead one to optimize the dimensions into the claimed ranges.

In this regard, it is noted that optimization of ranges requires the prior art to first recognize that the features (i.e., diameter, thickness) being optimized are result-effective variables. The Examiner is directed to MPEP § 2144.05(II)(B) under the heading "Only Result-Effective Variables Can Be Optimized", which sets forth the applicable standard for determining result-effective variables:

A particular parameter must first ***be recognized*** as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination

of the optimum or workable ranges of said variable might be characterized as routine experimentation. (citing *In re Antonie*, 195 USPQ 6 (CCPA 1977)).

In the instant case, as discussed above, the cited prior art is completely silent as to the features having a *particular* dimension, let alone that the particular dimension achieves a recognized result. Accordingly, it is respectfully submitted that the Examiner's optimization is *per se* improper because the cited prior art does not disclose particular dimensions in the first place, let alone suggest a recognized result of those dimensions as done by Applicants.

Based on all the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 103 be withdrawn.

#### CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**Date: July 1, 2004**